UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/765,655	RORIE, HEATHER N.
	Examiner	Art Unit	
	Ian N. Moore	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _27 January 2004_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-26_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-15, 18 and 20-26_ is/are rejected.

7)☒ Claim(s) _16, 17 and 19_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _27 January 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _1/27/04._

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Specification

1.   It is noticed that the specification does <u>not</u> include **section (f) "Background of the invention" and section (g) "Brief Summary of the invention"**.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
     DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
     COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
     (1) Field of the Invention.
     **(2) Description of Related Art including information disclosed under 37 CFR
     1.97 and 1.98.**
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence
     Listing" is required on paper if the application discloses a nucleotide or amino
     acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence
     Listing" is not submitted as an electronic document on compact disc).

Claim Objections

2.   Claims 7-10,12-17 and 23-25 are objected to because of the following informalities:

Claim 7 recites, **"address information"** in line 10. For clarity and consistency with "address information" in line 6, it is suggested to revise "address information" in line 10 as **"the address information"**.

Claim 8 recites, **"address information"** in line 3. For clarity and consistency with "address information" in claim 7, line 6, it is suggested to revise "address information" in line 3 as **"the** address information".

Claim 9 is also objected for the same reason as set forth above in claim 8.

Claim 10 recites, **"a fail-over virtual router interface"** in line 1-2. For clarity and consistency with "a fail-over virtual router interface" in claim 7, line 9, it is suggested to revise "a fail-over virtual router interface" in line 1-2 as **"the** fail-over virtual router interface".

Claim 10 recites, **"memory"** in line 2. For clarity and consistency with "memory" in claim 7, line 5, it is suggested to revise "memory" in line 2 as "**the** memory".

Claim 12 recites, **"the** virtual router interface" in line 2. Since it is recited for the first time in the claim, for clarity it is suggested to change "the virtual router interface" to "**a** virtual router interface".

Claims 13-15 are also objected for the same reason as set forth above in claim 12.

Claim 16 recites, **"address information"** in line 2. For clarity and consistency with "address information" in claim 11, line 4, it is suggested to revise "address information" in line 2 as "**the** address information".

Claim 23 recites, "**a first physical router**" in line 2. For clarity and consistency with "a

first physical router" in claim 22, line 3, it is suggested to revise "a first physical router" in line 2

as "**the** first physical router".

Claim 25 is also objected for the same reason as set forth above in claim 23.

Claim 23 recites, "**a second physical router**" in line 3. For clarity and consistency with

"a second physical router" in claim 22, line 4, it is suggested to revise "a second physical router"

in line 3 as "**the** second physical router".

Claims 17 and 24 are also objected since they are depended upon objected claims 16 and

23 as set forth above.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 11,12,13 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by

Alexander (US005949753A).

Regarding Claim 11, Alexander discloses a method of setting up router redundancy (see

FIG. 4, method for setting primary and backup routers by the a LAN Emulation Server (LES)

316) between a first (see FIG. 3, primary Router 312) and a second physical router (see FIG. 3,

backup router 314), comprising:

executing program instructions (see FIG. 4, executing/processing method/programs) to

communicate, between the first physical router and the second physical router, address

information assigned to the first physical router (see FIG. 4, S404,406; see col. 3, line 7-50; see

col. 4, line 38-42, 43-45; LES 316 communicates/conveys/transmits assigned IP address 3 (IP3)

or MAC address 3 (MAC3) information of primary router 312 between primary router 312 and

backup router 214);

designating a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual

client (LEC) interface/port 306) for the first physical router (see FIG. 3, for primary router 312)

on the second physical router based on the address information (see FIG. 4, S408; LES 316

registers/designates LEC 306 on the backup router 314 for the primary router 312 according to

IP3/MAC3 information; see col. 3, line 25-50; see col. 4, line 44-52).

Regarding Claim 12, Alexander discloses assigning address information (see FIG. 3,

assigning/registers/setup IP address 3 (IP3) or MAC address 3 (MAC 3) information) to the

virtual router interface (see FIG. 3, to LEC 306) based on the address information assigned to the

first physical router (see FIG. 4, S404, 406, S408; according to IP3/MAC3 information assigned

to primary router 312's LEC 308; see col. 3, line 25-50; see col. 4, line 44-52).

Regarding Claim 13, Alexander discloses assigning a virtual IP address to the virtual

router interface (see FIG. 3, assigning/registers/setup IP address 3 (IP3) to LEC 306) based on

the address information assigned to the first physical router (see FIG. 4, S404, 406, S408;

according to IP3/MAC3 information assigned to primary router 312's LEC 308; see col. 3, line

25-50; see col. 4, line 44-52).

Regarding Claim 18, Alexander discloses a method of setting up router redundancy

between a first (see FIG. 3, primary Router 312) and a second physical router (see FIG. 3,

backup router 314), comprising:

assigning an IP address to the first physical router (see FIG. 3, IP address 1 (IP1) to

primary router 312; see col. 3, line 1-15);

designating a domain of the first physical router (see FIG. 3,

assigning/designating/registering subnet/domain IP0 of primary router 312 as default gateway;

see col. 3, line 7-34); and

auto-configuring address information (see FIG. 3, automatically registers/setup IP

address 3 (IP3) or MAC address 3 (MAC 3) information) for a virtual router on the second

physical router (see FIG. 3, for proxy LAN emulated/virtual client (LEC) 306 on the backup

router 306 (i.e. virtual router); see col. 1, line 40-45,56-61; see col. 3, line 15-45) based on the IP

address and domain of the first physical router by executing program instructions to

communicate between the first and second physical routers (see FIG. 4, S404,406,S408; LES

316 automatically registers/designates address IP3/MAC3 information for a LEC 306 on backup

router 314 according to IP1 and subnet/domain IP0 of primary router 312 by

executing/processing method/programs (see FIG. 4) to communicates between routers 312 and

314; see col. 3, line 25-50; see col. 4, line 44-52).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

6.   Claims 1-5,7-10, and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Alexander (US005949753A) in view of Datta (US006493341B1).

Regarding Claim 1, Alexander discloses a network device having router functionality

(see FIG. 3, a LAN Emulation Server (LES) 316 which routes/switch data; see col. 3, line 17-

21), comprising:

program instructions (see FIG. 4, method/program instructions, S404, 406,408) to

designate a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual client

(LEC) interface/port 306) for a first physical router (see FIG. 3, Router 312; see col. 3, line 1-6)

on a second physical router (see FIG. 3, backup Router 314; see col. 3, line 1-6) based on address

information obtained via communication (see FIG. 3, ELAN 310) between the first physical

router and the second physical router (see FIG. 4, S408; LES 316 registers/designates LEC 306

of backup router 314 according to IP3/MAC3 communicated/conveyed from router 312 via

communication over network 310; see col. 3, line 25-50; see col. 4, line 44-52).

Alexander does not explicitly disclose a processor; memory in communication with the

processor, and program instructions stored in memory and executable on the processor.

However, it is well known in the art that a network management

system/server/switch/hub contains a processor/CPU, memory in communication with the

processor, and program instructions stored in memory and executable on the processor in order

to perform the methods/steps. In particular, Datta teaches a network device (see FIG. 2, 4,

controller 202) comprising:

a processor (see col. 7, line 1-7; one processor);

memory in communication with the processor (see col. 7, line 1-7; memory accessible to the processor); and

program instructions stored in memory and executable on the processor (see col. 7, line 1-7; software contains executable instructions and data which are stored in the memory and which guide operation of the processor).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a processor; memory in communication with the processor, and program instructions stored in memory and executable on the processor, as taught by Datta in the system of Alexander, so that it would guide operation of the processor in order to perform the routing functions; see Datta col. 7, line 5-7; also both processor and memory are required in order to execute or perform the method/procedure of the system of Alexander.

Regarding Claim 2, Alexander discloses program instructions which execute to assign an IP address for the fail-over virtual router interface of the second physical router (see FIG. 4, S408; LES 316 registers/assigns IP3 address for LEC 306 of backup router 314; see col. 3, line 25-50; see col. 4, line 44-52).

Regarding Claim 3, Alexander discloses wherein the network device is a management station (see FIG. 3, a LAN Emulation Server (LES) 316 manages/controls the network 300; see col. 3, line 17-21).

Regarding Claim 4, Alexander discloses wherein the network device is a network switch (see FIG. 3, a LAN Emulation Server (LES) 316 which routes/switch data; see col. 3, line 17-

21). Datta also discloses wherein the network device is a network switch (see col. 7, line 1-6;

controller 30 is a router or bridge which performs switching).

Regarding Claim 5, Alexander discloses wherein the network device is a network hub

see FIG. 3, a LAN Emulation Server (LES) 316 which routes/hub-ing data between router 312

and 314, and thus it has a hub functionality; see col. 3, line 17-21). Datta also discloses wherein

the network device is a network switch (see col. 7, line 1-6; see FIG. 2, controller 30 is a router

or bridge with one input from subnet 106 and multiple outputs 210 to routers 110, thus it also has

a hub functionality).

Regarding Claim 7, Alexander discloses a network management system (see FIG. 3, a

system manages/controls by a LAN Emulation Server (LES) 316; see col. 3, line 17-21),

comprising:

a first physical router (see FIG. 3, Router 312; see col. 3, line 1-6);

a second physical router (see FIG. 3, backup Router 314; see col. 3, line 1-6) including:

means for obtaining (see FIG. 3, LES 316) address information (FIG. 4, S404; LES 316

gets/receives/acquires from IP address 3 (IP3) or MAC address 3 (MAC3) information) from the

first physical router (see FIG. 3, from Router 312; see col. 4, line 38-42) and communicating the

address information to the second physical router (see FIG. 4, S406; LES 316

communicates/conveys/transmits IP3/MAC3 to backup router 314; see col. 3, line 7-50; see col.

4, line 43-45) and

means for designating (see FIG. 3, LES 316) a fail-over virtual router interface (see FIG.

3, proxy LAN emulated/virtual client (LEC) interface/port 306) on the second physical router

(see FIG. 3, backup Router 314) based on address information obtained from the first physical

router (see FIG. 4, S408; LES 316 registers/designates LEC 306 of backup router 314 according

to IP3/MAC3 receives from router 312; see col. 3, line 25-50; see col. 4, line 44-52).

Alexander does not explicitly disclose a processor; memory in communication with the

processor.

However, it is well known in the art that a network management

system/server/switch/hub contains a processor/CPU and memory in communication with the

processor in order to perform the methods/steps. In particular, Datta teaches a network

.management system (see FIG. 2, 4, controller 202) comprising:

a processor (see col. 7, line 1-7; one processor);

memory in communication with the processor (see col. 7, line 1-7; memory accessible to

the processor).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to provide a processor; memory in communication with the processor, as

taught by Datta in the system of Alexander, so that it would enable the software, which contains

executable instructions and data stored in the memory, to guide operation of the processor in

order to perform the routing functions; see Datta col. 7, line 5-7; also both processor and memory

are required in order to execute or perform the method/procedure of the system of Alexander.

Regarding Claim 8, the combined system of Alexander and Datta discloses wherein the

means for obtaining address information includes program instructions which execute as set forth

above in claim 1. Alexander further discloses executing in the first physical router to transfer

address information to the second physical router (see FIG. 2, LEC 308 of the primary router 312

executes/processes to communicate/convey/transmit IP3/MAC3 information to LEC 306 of the

backup router 314; see col. 3, line 7-50; see col. 4, line 7-45).

Regarding Claim 9, the combined system of Alexander and Datta discloses wherein the

means for obtaining address information includes program instructions which execute as set forth

above in claim 1. Alexander further discloses executing in the second physical router to receive

address information from the first physical router (see FIG. 2, LEC 309 of the backup router 314

executes/processes communicated/conveyed/received IP3/MAC3 information from LEC 308 of

the primary router 312; see col. 3, line 7-50; see col. 4, line 7-45).

Regarding Claim 10, the combined system of Alexander and Datta discloses wherein the

means for designating a fail-over virtual router interface as set forth above in claim 7. Alexander

further discloses program instructions (see FIG. 4, method/program instructions, S404, 406,408;

see col. 4, line 7-52).

Alexander does not explicitly disclose executable on the processor.

However, Datta further discloses program instructions stored in memory and executable

on the processor (see col. 7, line 1-7; software contains executables instructions and data that are

stored in the memory and which guides the operations of the processor).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to provide program instructions stored in memory and executable on the

processor, as taught by Datta in the system of Alexander, so that it would enable to perform the

routing functions; see Datta col. 7, line 5-7; also both processor and memory are required in

order to execute or perform the method/procedure of the system of Alexander.

Regarding Claim 22, Alexander discloses a program to cause a device (a LAN

Emulation Server (LES) 316; see col. 3, line 17-2) perform a method (see FIG. 4, method

processed by LES 316), comprising:

executing program instructions (see FIG. 4, executing/processing method/programs) to

communicate, between the first physical router and the second physical router, address

information assigned to the first physical router (see FIG. 4, S404, 406; see col. 3, line 7-50; see

col. 4, line 38-42, 43-45; LES 316 communicates/conveys/transmits assigned IP address 3 (IP3)

or MAC address 3 (MAC3) information of primary router 312 between primary router 312 and

backup router 214);

designating a fail-over virtual router interface (see FIG. 3, proxy LAN emulated/virtual

client (LEC) interface/port 306) for the first physical router (see FIG. 3, for primary router 312)

on the second physical router based on the address information (see FIG. 4, S408; LES 316

registers/designates LEC 306 on the backup router 314 for the primary router 312 according to

IP3/MAC3 information; see col. 3, line 25-50; see col. 4, line 44-52).

Alexander does not explicitly disclose a computer readable medium.

However, it is well known in the art that a network management

system/server/switch/hub contains a computer readable medium or memory having a program to

cause a device to perform a methods/steps. In particular, Datta teaches a computer readable

medium having a program (see col. 7, line 1-7; memory stores software instructions) to cause a

device (see FIG. 2, 4, controller 202) to perform a methods/steps (see FIG. 4, methods/steps; see

col. 7, line 1-7; see col. 23, line 24-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to provide a computer readable medium, as taught by Datta in the system

of Alexander, so that it would enable the software, which contains executable instructions and

data stored in the memory, to guide operation of the processor in order to perform the routing

functions; see Datta col. 7, line 5-7; also both processor and memory are required in order to

execute or perform the method/procedure of the system of Alexander.

Regarding Claim 23, Alexander discloses assigning a first IP address (see FIG. 3,

assigning/configuring IP1; see col. 3, line 1-35) for a first local area network to a first physical

router (see FIG. 3, LAN that couples to primary router 312; see col. 1, line 15-30; see col. 2, line

41-65) and assigning a second IP address (see FIG. 3, assigning/configuring IP2; see col. 3, line

1-35) for a second local area network to a second physical router (see FIG. 3, LAN that couples

to backup router 314; see col. 1, line 15-30; see col. 2, line 41-65).

Regarding Claim 24, Alexander discloses designating a fail-over virtual router for the

first IP address (see FIG. 3, LEC 308 for IP1) and designating a fail-over virtual router for the

second IP address (see FIG. 3, LEC 306 for IP2); see col. 3, line 1-40.

Regarding Claim 25, Alexander discloses assigning a first IP address (see FIG. 3,

assigning/configuring IP2; see col. 3, line 1-35) for a first local area network (see FIG. 3, LAN

that couples to router 314; see col. 1, line 15-30; see col. 2, line 41-65) and assigning a second IP

address (see FIG. 3, assigning/configuring IP3; see col. 3, line 1-35) for a second local area

network to a first physical router (see FIG. 3, LAN that couples to router 312; see col. 1, line 15-

30; see col. 2, line 41-65).

Regarding Claim 26, Alexander discloses communicating between the first and second

physical router using a layer-2 packet (see FIG. 2-3, router 312, router 314 and ATM hosts

104,110 or end station 302 communicate over a ELAN network 310, thus it is clear that a ATM

(i.e. layer 2 protocol) message/packet communicated between the routers; see col. 2, line 41 to

col. 3, line 7; see col. 4, line 5-36).

7.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander in view

of Datta as applied to claim 1 above, and further in view of Perlman (US005313465A).

Regarding Claim 6, the combined system of Alexander and Datta discloses executing

program instructions as set forth above. Alexander further discloses communicating an IP

address between the first physical router and the second physical router (see FIG. 4, S408; LES

316 communicates/conveys IP3 address between primary router 312 and backup router 314; see

col. 3, line 25-50; see col. 4, line 44-52), and designating a domain of the first physical router

(see FIG. 3, assigning/designating/registering subnet/domain IP0 of primary router 312 as default

gateway; see col. 3, line 7-34).

Neither Alexander nor Datta explicitly discloses domain identifier.

However, Perlman discloses communicating domain identifier between first router and

second router (see FIG. 1, communicating/conveying domain number/identifier between first

router (e.g. R3) and second router (e.g. R1 or R4); see col. 1, line 56 to col. 2, line 2; see col. 4,

line 43 to col. 6, line 10; see col. 7, line 14-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to communicates domain identifier/number, as taught by Perlman, in the

combined system of Alexander and Datta, so that it would provide merging networks across a

common backbone network and facilitates the interconnection of networks operation; see

Perlman col. 1, line 50-56.

8.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander in

view of Kanekar (US007006431B1).

Regarding Claim 14, Alexander discloses assigning to the virtual router interface (see

FIG. 3, assigning/registers/setup IP address 3 (IP3) to LEC 306) based on the address

information assigned to the first physical router (see FIG. 4, S404, 406, S408; according to

IP3/MAC3 information assigned to primary router 312's LEC 308; see col. 3, line 25-50; see col.

4, line 44-52).

Alexander does not explicitly disclose a mask length.

However, Kanekar teaches assigning a mask length (see FIG. 4, configuration mask 418

(which has a length) 410) to the virtual router interface (see FIG. 2, shared interface 108 of R2;

see FIG. 3, shared interface 206 of R2; see col. 5, line 40-45; col. 6, line 5-20) based on the

address information assigned to the first physical router (see FIG. 3, configuration infor 208 (i.e.

see FIG. 4, configuration file 402) is sent from master router R1 to the shared interface of slave

router R3 in order to configure a mask which has length 418; see col. 7, line 1-20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to provide configuration masking length, as taught by Kanekar in the

system of Alexander, so that it would reduce switchover time upon failure; see Kanekar col. 2,

line 11-16.

9.   Claims 15, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Alexander in view of Singh (US 20050177762A1).

Regarding Claim 15, Alexander discloses assigning to the virtual router interface (see

FIG. 3, assigning/registers/setup IP address 3 (IP3) to LEC 306) based on the address

information assigned to the first physical router (see FIG. 4, S404, 406, S408; according to

IP3/MAC3 information assigned to primary router 312's LEC 308; see col. 3, line 25-50; see col.

4, line 44-52).

Alexander does not explicitly disclose a router identifier.

However, Singh teaches assigning a router identifier to the virtual router interface (see

FIG. 2, configuring/assigning virtual router ID number of the logical interface 242/244) based on

the address information assigned to the first physical router (see FIG. 2, according to

advertisement packet that includes a field that indicates the first virtual router ID of the network

work device 210/211; see page 3, paragraph 30-31).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to provide a router identifier, as taught by Singh in the system of

Alexander, so that it would provide efficient, conjoined fail-over of logical interfaces; see Singh

page 1, paragraph 1,4.

Regarding Claim 20, Alexander discloses communicating between the first physical

router and the second physical router (see FIG. 4, S406; LES 316 communicates/conveys

between primary router 312 and backup router 314) to obtain an address information assigned to

the first physical router (FIG. 4, S404; in order to gets/receives/acquires IP address 3 (IP3) or

MAC address 3 (MAC3) information assigns/configures to the primary router 312); see col. 3,

line 7-50; see col. 4, line 43-45.

Alexander does not explicitly disclose a router identifier.

However, Singh teaches communicating between the first physical router (see FIG. 2,

communicates between network device 210) and the second physical router (see FIG. 2, and

network device 211) to obtain a router identifier assigned to the first physical router (see FIG. 2,

to get/receive/acquire virtual router ID assigned to the logical interface 242); see page 3,

paragraph 30-31.

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to provide a router identifier, as taught by Singh in the system of

Alexander, so that it would provide efficient, conjoined fail-over of logical interfaces; see Singh

page 1, paragraph 1,4.

Regarding Claim 21, Alexander discloses designating address information of the second

physical router based upon the address information obtained from the first physical router (see

FIG. 4, S408; LES 316 registers/designates LEC; see col. 3, line 25-50; see col. 4, line 44-52).

Alexander does not explicitly disclose a router identifier. However, Singh teaches

However, Singh teaches designating a router identifier to the second physical router (see

FIG. 2, configuring/assigning virtual router ID number to the network device 211) based on the

address information assigned to the first physical router (see FIG. 2, according to advertisement

packet that includes a field that indicates the first virtual router ID of the network work device

210; see page 3, paragraph 30-31).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to provide a router identifier, as taught by Singh in the system of

Alexander, so that it would provide efficient, conjoined fail-over of logical interfaces; see Singh

page 1, paragraph 1,4.

Allowable Subject Matter

10.   **Claim 16 and 17** are objected to as set forth in paragraph 2 and being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 16 is allowable over the prior art of record since the cited reference taken

individually or in combination fails to particularly disclose or render obvious the following italic

limitations:

In claim 16, ... *designating a fail-over virtual router interface for the second physical*

router on the first physical router based on the address information assigned to the second

physical router... in combination with other limitations recited as specified in Claim 16.

11.   **Claim 19** are objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 19 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose or render obvious the following italic limitations:

In claim 19, ... *auto-configuring address information for a virtual router on the first physical router based on the IP address and domain of the second physical router by executing program instructions to communicate between the first and second physical routers....* in combination with other limitations recited as specified in Claim 19.

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- **Critchfield (US007152179B1)** discloses a switch providing failover services in the event that an active router or other gateway device fails.

- **Natarajan (US007136931B2)** discloses a system for identifying active and standby states of plurality of routers within a virtual router in a network.

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ian N. Moore
Art Unit 2616